45. A method for programmable processing in a hardware graphics accelerator, comprising:

receiving graphics data including lighting information in a hardware graphics accelerator; and

performing programmable operations on the graphics data utilizing the hardware graphics accelerator in order to generate output, wherein the operations are programmable by a user utilizing instructions from a predetermined instruction set capable of being executed by the hardware graphics accelerator;

wherein the operations include a set on less operation.

48. A method for processing graphics data, comprising:

transforming the graphics data utilizing a hardware graphics accelerator; and

lighting the graphics data utilizing the hardware graphics accelerator;

wherein at least one of the transforming and the lighting includes performing operations on the graphics data utilizing instructions from an instruction set capable of being executed by the hardware graphics accelerator, the operations including a no operation, a load, a move, a multiply, an addition, and a set on less than each capable of being carried out by the hardware graphics accelerator.

49. A method for processing graphics data, comprising:

transforming the graphics data utilizing a hardware graphics accelerator; and

lighting the graphics data utilizing the hardware graphics accelerator;

wherein at least one of the transforming and the lighting includes performing operations on the graphics data utilizing instructions from an instruction set capable of being executed by the hardware graphics accelerator, the instruction set including a no operation instruction, a load instruction, a move instruction, a multiply instruction, an addition instruction, and a set on less than instruction.

52. A method for processing graphics data utilizing a hardware graphics accelerator, comprising:

transforming the graphics data utilizing the hardware graphics accelerator; and

lighting the graphics data utilizing the hardware graphics accelerator;

wherein the transforming and the lighting include performing operations on the graphics data utilizing instructions from an instruction set capable of being executed by the hardware graphics accelerator, the instruction set including a no operation instruction, a load instruction, a move instruction, a multiply instruction, an addition instruction, and a set on less than instruction;

wherein the transforming and the lighting further include negating the graphics data and branching.

53. A method for processing graphics data utilizing a hardware graphics accelerator, comprising:

transforming the graphics data utilizing the hardware graphics accelerator, the graphics data including constants; and

lighting the graphics data utilizing the hardware graphics accelerator;

wherein the transforming and the lighting include performing operations on the graphics data utilizing instructions from an instruction set capable of being executed by the hardware graphics accelerator, the instruction set including a no operation instruction, a load instruction, a move instruction, a multiply instruction, an addition instruction, and a set on less than instruction;

wherein the transforming and the lighting further include negating the graphics data and branching;

wherein a plurality of the operations are performed in parallel;

wherein the hardware graphics accelerator operates with an OpenGL application program interface.

54. A method as recited in claim 45, wherein the operations further include a move, a multiply, an addition, a multiply and addition, a reciprocal, a reciprocal square root, a three component dot product, a four component dot product, a distance, a minimum, a maximum, a set on greater or equal than, an exponential, a logarithm, and a lighting.

55. A method as recited in claim 45, wherein the graphics data includes vertex data, and the operations perform vertex processing on the vertex data.

56. A method as recited in claim 55, wherein multiple vertices represented by the vertex data are operated upon in parallel.

57. A method as recited in claim 45, wherein the graphics data is swizzled.

58. A method as recited in claim 52, wherein the instruction set further includes a multiply and addition instruction, a reciprocal instruction, a reciprocal square root instruction, a three component dot product instruction, a four component dot product instruction, a distance instruction, a minimum instruction, a maximum instruction, a set on greater or equal than instruction, an exponential instruction, a logarithm instruction, and a lighting instruction.

59. A method as recited in claim 52, wherein the graphics data includes vertex data, and the operations perform vertex processing on the vertex data.

60. A method as recited in claim 59, wherein multiple vertices represented by the vertex data are operated upon in parallel.

61. A method as recited in claim 52, wherein the graphics data is swizzled.

62. A method as recited in claim 52, and further comprising:

determining whether the hardware graphics accelerator is operating in a programmable mode;

performing the operations on the graphics data if it is determined that the hardware graphics accelerator is operating in the programmable mode; and

operating on the graphics data in accordance with a standard graphics application program interface if it is determined that the hardware graphics accelerator is not operating in the programmable mode.